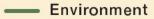








Regional Facts



Livelihood

— Nutrition





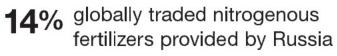






2020

41% potash-based fertilizers provided by Belarus



11% phosphorous-based fertilizers provided by Russia



AGRICULTURAL INPUTS

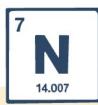


80% of nitrogen used is wasted today

200 million tonnes of reactive nitrogen are lost to the environment every year

AT A COST OF

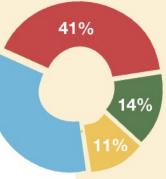
USD 200 B





Mariama Mamane | JACIGREEN | Burkina Faso

Mariama Mamane's innovation is a 4-in-1 solution converting water hyacinth into organic fertilizer and electricity, simultaneously enhancing river health and clean water access.









Innovator: Mariama Mamane

Business: JACIGREEN. Location: Burkina Faso

Mariama's 'Jacigreen' is taking on invasive water hyacinth choking the Niger river. The project generates organic fertiliser and compost while offering local communities clean energy through biogas. It not only supports water and food security, but also empowers farmers, provides training opportunities for women, and contributes to the reduction of poverty.





Improving food security and increasing crop yields in the Sahel region.



Empowering women farmers and improving their access to education and financial resources.



Providing communities affordable clean energy through the supply of biogas



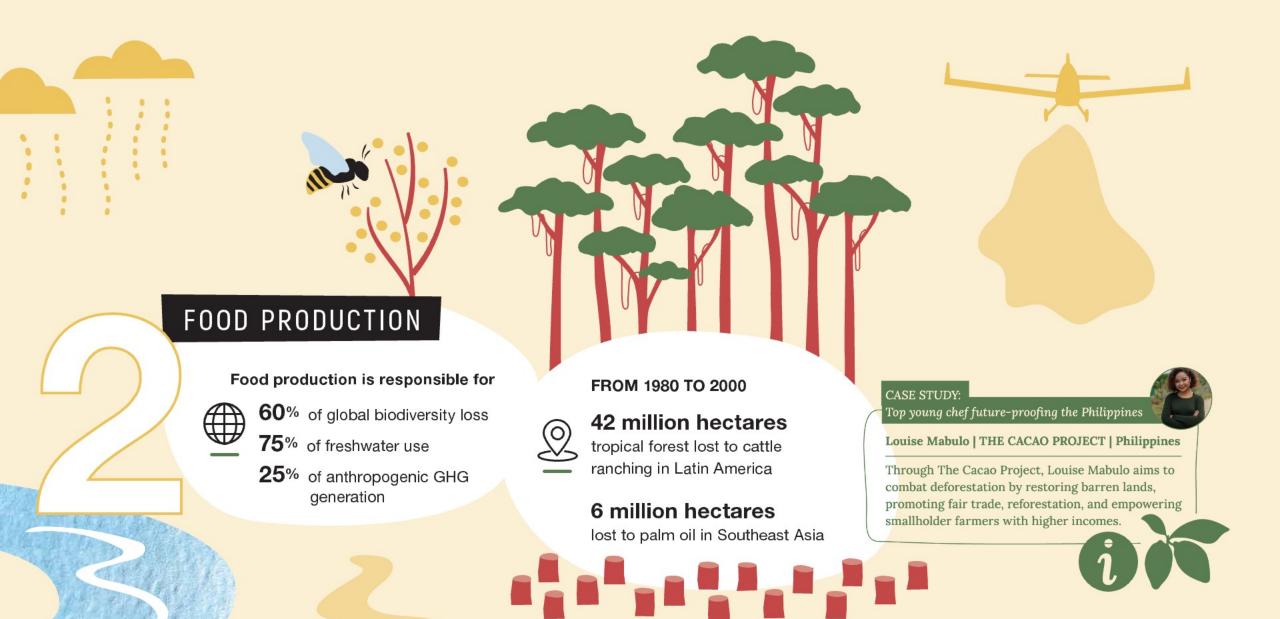
Promoting sustainable land use practices and water conservation through the Zaï technique.



Addressing desertification and improving soil health in arid regions.

We must find nature-based solutions to meet the challenges of the planet. I decided to spend my time and energy on this project because the transformation of the water hyacinth brings an elegant solution to the problem of the proliferation of this plant.









Innovator: Louise Mabulo Business: The Cacao Project

Location: Philippines

The Cacao project is leading reforestation in the Philippines, supporting farmers affected by natural disasters and deforestation. By restoring degraded landscapes, planting high-value trees, promoting fair trade, and creating economic development, this project empowers farmers with higher incomes, promoting regenerative farming methods and building resilience to the impacts of climate change. To date over 200 farmers have been supported, planting over 70 000 trees through 70 hectares of land.





Provides training and resources to youth and marginalised farmers, alleviating poverty and creating economic opportunities in rural communities.



Sustainable agriculture practices and market access, improves food security and increases farmers' incomes.



Promotes sustainable farming techniques and environmentally friendly practices in responsible production and consumption.



Promotes
agroforestry,
contributing to
restoration and
conservation of
ecosystems,
supporting
biodiversity.

There is great potential in harnessing the power of our forests in rethinking Philippine food systems. We hope to educate farmers so that they can live a better quality of life.







smallholder farmers experience post-harvest food loss with up to 15% reduced income

Developing countries are hit the hardest.



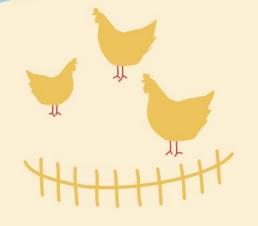
37% of food produced in Sub-Saharan Africa is lost post-harvest (estimated by FAO since 2011)

waste into energy in India

Vidyut Mohan | TAKACHAR | India

Vidyut Mohan tackles India's post-harvest waste challenge by converting crop waste into marketable products using Takachar, a portable and affordable biomass upgrading equipment that benefits rural farmers.











INNOVATOR: VIDYUT MOHAN BUSINESS: TAKACHAR LOCATION: INDIA

Takachar aims to increase the transformation of waste biomass into marketable products globally, reducing pollution from open-air biomass burning. Through affordable and portable biomass upgrading equipment, rural farmers can convert crop residues into fuels, fertilizers, and value-added chemicals on-site, earning 40% more income. By 2030, Takachar plans to impact 300 million farmers, generating \$4 billion per year in additional rural income and jobs, and mitigating one gigaton per year of CO² equivalent emissions.





Provides clean energy through biomass briquettes and biochar, reducing dependence on fossil fuels.



The enterprise employs innovative technology to transform waste biomass and create value-added products.



Helps improve urban environments by reducing waste generation, decreasing pollution, and promoting a circular economy.



Encourages responsible production practices and supports sustainable consumption patterns.



Renewable energy solutions from post-harvest waste help mitigate climate change by reducing greenhouse gas emissions and promotes the use of clean energy sources.

We'd like to scale the amount of activated carbon that can be produced from biomass, starting with making the coconut shell value-chain less polluting than what it is right now and bringing the value more towards farmers.



"





CASE STUDY: Low- tech dehydrator supporting small scale female farmers

Nidhi Pant | S4S (SCIENCE FOR SOCIETY) TECHNOLOGIES | India

S4S Technologies, led by Nidhi Pant, offers solar-powered dryers that process vegetables, reducing spoilage, providing preservative-free nutrition, and ensuring farmers a guaranteed source-to-market for solar-processed goods.







Employs 65-70% of African workforce

Supports 90% of livelihoods of Africa's population

Accounts for approx 25% of continent's GDP

Global Fruit & Vegetable **Processing market**



valued at USD 204 million



Expected to expand by 11.46% to USD 391 million















Innovator: Nidhi Pant

Company: S4S (Science for Society) Technologies

Place: India

Nidhi Pant, inspired by a severe drought in her hometown, co-founded S4S Technologies which focuses on producing quality solar-dehydrated products, assisting women without land as well as farmers to become entrepreneurs by providing micro food processing units that help them generate an average additional income of \$1 000 - \$1 500 annually. S4S currently operates in eight countries and allows entrepreneurs to generate additional income and eventually own their equipment.





Works with farmers who earn less than \$2.50 a day to create sustainable income for their families.



Transforming the lives of female farmworkers, S4S Technologies helps women gain new economic and social status as entrepreneurs



The Solar Conduction Dryer (SDC) is cost effective and provides income generation without the production of pollution.



Micro food processing units assist farmers to become entrepreneurs helping them generate additional income.



The enterprise employs innovative technology to process crop harvests.



S4S's renewable energy solutions help mitigate climate change by reducing greenhouse gas emissions while using clean energy sources.

S4S model transforms landless women farmers to become micro-entrepreneurs, climate warriors and changemakers. S4S believes bringing government authorities and grassroots women together is critical to affecting sustainable change.





FOOD DISTRIBUTION



4% of global GHG emission

is caused by the food cold chain. This includes cold chain technologies as well as food loss and waste due to lack of refrigeration.



37%



the estimated food loss waste in sub-Saharan Africa

120-170kg

per year per capita.

CASE STUDY: Sustainable distribution through renewable cold-chain.



Dysmus Kisilu | SOLAR FREEZE | Kenya

Dysmus Kisilu is founder of Solar Freeze, a Kenya-based enterprise that has pioneered mobile cold storage units powered by renewable energy to help rural smallholder farmers reduce post-harvest losses.













Providing training and resources to marginalised farmers, alleviating poverty and creating economic opportunities in rural communities.



Enhancing food security and reducing post-harvest losses by providing climate-smart distribution, powered by renewable energy.



Solar Freeze provides renewable energy services to marginalised farmers.



Provides new skills for youth (ages 18 to 29) trained in the operation, maintenance and repair of renewable energy equipment.



The enterprise employs innovative technology for sustainable food storage and distribution.



This solution helps mitigate climate change by reducing greenhouse gas emissions and promoting the use of renewable energy sources.



Innovator: Dysmus Kisilu Business: Solar Freeze

Location: Kenya

Dysmus has tackled postharvest losses and lack of cold storage in Eastern Kenya. Through a "pay-as-you-store" system, smallholder farmers can store produce in portable solar cold rooms for as little as \$0.1 cents. He also launched the "Everyone, teaches, trains and wins" project, training young people in renewable energy and smart agriculture, providing them with regular income and developing the next generation of leaders in climate-friendly practices. Through his technology, smallholder farmers have seen over 150% increase in agricultural yields since 2016.

RESOURCES



RESOURCES



The idea is not only to increase yields, but also to make new generations aware of renewable energies.







FOOD MARKETS

90%



of the world's marine fish stocks are fully exploited, overexploited or depleted.





Serge Raemakers' ABALOBI, is facilitating the achievement of equitable, transparent and traceable seafood value chains through the ABALOBI MARKETPLACE app.



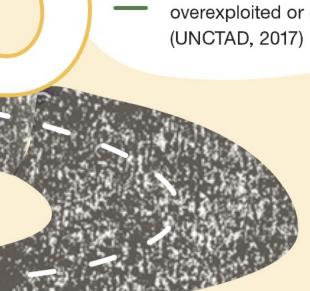
97%

of the world's fishermen live in developing countries.

60 million

people are involved in fisheries and aquaculture.









Innovator: Serge Raemaekers

Company: Abalobi - Fish with a story

Place: South Africa

The ABALOBI Fisher App records fishers' catches, activities, expenses, and income, providing basic analytics and allowing direct sales to consumers. Abalobi shortens the value chain, improves profits, and stimulates community entrepreneurship. By analyzing the logged information, the app supports fishers in making informed decisions while filling data gaps in the sector. This digital platform empowers fishers with proof of their livelihood and enables consumers to track the entire value chain through QR codes.





Providing training and resources to small-scale fishers, alleviating poverty and creating economic opportunities.



The App has a full suite of tools that combine e-commerce with logistics, deliveries and digital payment gateway integrations as well as training and community development.



Fishers are poised to rebuild their fisheries and help develop more ethical and transparent food systems. Consumers are engaged to help elevate fisherfolk, recognise their livelihoods while making informed choices.



ABALOBI's drives sustainable fishing practices through its community of fishers.



ABALOBI's focus is on strong partnerships and cooperation for sustainable seafood value-chains.

66 Our central goal of supporting fishers through tech to be owners and users of their data, coupled with the development of equitable and transparent markets for traceable, locally sourced seafood, aims to shift fishers to a more equitable position in the value chain.







FOOD CONSUMPTION





Estimated to still be undernourished in 2030

8% of the world population

The same percentage as in 2015 when 2030 Agenda was launched.



9 BILLION IN 2050

Predicted world population

70% estimated increase of food calories required

70% more dependence on the productivity of our landscapes and oceans.

CASE STUDY: A Fitbit for sustainable shopping

Hugh Weldon | Evocco | Ireland

By taking a picture of your shopping receipt, Hugh Weldon's Evocco app gives a climate breakdown of products bought, helping consumers get the most nutritious food for the lowest climate impact.









Innovator: Hugh Weldon

Company: Evocco Place: Ireland

Launched in Ireland in 2020 and the UK in 2021, Evocco is a mobile app that enables users to track and improve their carbon footprint through food purchasing choices. By taking photos of food receipts, users can see their score, which combines the climate impact and nutritional value of their purchases, encouraging more sustainable choices, and driving system-wide change.





Evocco uses the power of innovative tech to shift consumer-behaviour towards more sustainable lifestyle choices.



Evocco is empowering consumers to take individual action and make more informed food purchases.



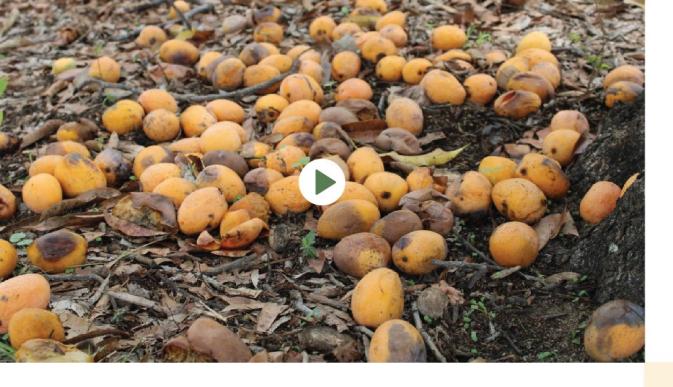
Evocco helps to build a 'collective consciousness' to encourage consumers to work together to achieve the reduction of emissions through food purchasing power.

Consumers are struggling to align their beliefs with their purchases. This is predominantly due to the lack of easily accessible, understandable and relatable information on the issue, resulting in widespread public confusion and frustration.



77







Innovator: Bonolo Monthe Company: Maungo Craft

Place: Botswana

Maungo Craft in Botswana turns processed fruit waste into low-sugar 'superfood' jams and gourmet preserves. Maungo reduces food waste and supports job creation, working with female harvesters and using indigenous ingredients, while contributing to the growth of the food and cosmetic sectors. This purpose-driven company expanded to the USA and became the first Botswana based food company to sell on Amazon, showcasing that waste can bring benefits to livelihoods, farmers, and the environment.

RESOURCES









Maungo Craft works with local vendors, creating jobs for more than 1000 fruit harvesters in the value chain.



Working closely with female harvesters, Maungo helps women gain new economic and social status as entrepreneurs.



The production of these indigenous jams is based on strong partnerships and cooperation for food waste value-chains



Maungo Craft's products include a range of unique and healthy preserves from indigenous food waste.

It takes roughly 300 tons of marula fruit pulp to get 12 tons of marula cosmetic oil.

The rest of the fruit typically goes under-utilized. So, we thought to ourselves, we know what happens with the oil, but what happens to all that fruit?



